

Name: _____

Date: _____

A2&T: Adding and subtracting rational expressions

HW: Complete Worksheet

Warm Up

Add or Subtract.

1. $\frac{5}{19} + \frac{7}{38}$

2. $\frac{2}{15} - \frac{3}{25}$

Key Concepts

Steps to Add or Subtract Rational Expressions:

2.

3.

4.

Examples

1. What is the least common multiple (LCM) of $2x^2 - 8x + 8$ and $15x^2 - 60$.

2. What is the sum of the two rational expressions in simplest form?

$$\frac{1}{3x^2 + 21x + 30} + \frac{4x}{3x + 15}$$

3. What is the difference of the two rational expressions in simplest form?

$$\frac{2x}{x^2 - 2x - 3} - \frac{3}{4x + 4}$$

I. Practice: Express as a single fraction

a] $\frac{3}{4} + \frac{2}{7}$

b] $\frac{6}{x} - \frac{7}{x+3}$

c] $\frac{6}{x} + \frac{7}{xy}$

II.

Express each of the following in simplest form over a single denominator.

1) $\frac{2x+3}{6x} - \frac{x-2}{4x}$

2) $\frac{3}{x+2} + \frac{x-2}{x}$

$$3) \frac{6}{y-5} - \frac{y+5}{y^2-25}$$

$$4) \frac{2}{a^2-4} - \frac{1}{a^2+2a}$$

$$5) \frac{1}{2-x} + \frac{2}{x-2}$$

$$6) \frac{x}{x^2-4x+3} - \frac{x}{x^2+2x-3}$$

$$7) \frac{y}{y-3} - \frac{18}{y^2-9}$$

$$8) \frac{2}{a+1} + \frac{3}{a^2-1}$$

$$9) \frac{2}{5a} + \frac{1}{4a}$$

$$10) \frac{1}{2a+2} + \frac{1}{a^2-1}$$

$$11) \frac{3}{x-3} + \frac{x}{3-x}$$

$$12) \frac{b}{b-1} - \frac{1}{2-2b}$$

$$13) \frac{1}{a+2} + \frac{a}{a^2+a} \div \frac{a}{a+1}$$

